

Title: Going to Orlando!

Brief Overview:

Students plan a trip from Baltimore, Maryland to Orlando, Florida, driving on Interstate 95 to visit Grandma. They calculate for each of the six states, the mileage driven and the amount of time needed to drive on Interstate 95 using graphic organizers and maps. Students multiply, divide, and add decimals to determine the total amount of money necessary for gas and food expenses. Their calculations are written in a Student Resource Booklet (SRB) using fractions, decimals, ratios, percents, and circle graphs. Finally, the students research and write (writing to inform) a “Plan of Action for Joe” for this younger sibling including the above information and interesting facts on at least two of the six states along Interstate 95.

Links to Standards:

- **Mathematics as Problem Solving**

Students will demonstrate their ability to solve problems in mathematics including problems with open-ended answers, problems which are solved in a cooperative atmosphere, and problems which are solved with the use of technology.

- **Mathematics as Communication**

Students will demonstrate their ability to communicate mathematically. They will read, write and discuss mathematics with language and the signs, symbols, and terms of the discipline.

- **Mathematics as Reasoning**

Students will demonstrate their ability to reason mathematically. They will make conjectures, gather evidence, and build arguments.

- **Mathematical Connections**

Students will demonstrate their ability to connect mathematics topics within the discipline and with other disciplines.

- **Computation and Estimation**

Students will demonstrate their ability to apply estimation strategies in computation, with the use of technology, in measurement, and in problem solving. They will determine reasonableness of solutions.

- **Number Sense and Operations**

Students will demonstrate their ability to describe and apply number relationships using concrete and abstract materials. They will choose appropriate operations and describe effects of operations on numbers.

- **Measurement**

Students will demonstrate and apply concepts of measurement using standard customary units. They will estimate and verify measurements. They will apply measurement to interdisciplinary and real-world problem solving situations.

- **Statistics**

Students will demonstrate their ability to collect, organize, and display data and will interpret information obtained from displays. They will write reports based on statistical information.

- **Fractions and Decimals**

Students will demonstrate and apply concepts of fractions, mixed numbers, and decimals; use models to relate fractions to decimals and to find equivalent fractions; compute with whole numbers, fractions, and decimals; and apply fractions and decimals to problem situations.

- **Algebra**

Students will demonstrate their ability to perform algebraic operations and will be able to model algebraic concepts using concrete materials.

Grade/Level:

Intermediate (5-7)

Duration/Length:

Task 1: 60 minutes

Task 2: 60 minutes

Task 3: 30 minutes

Task 4: 60 minutes

Task 5: 30 minutes

Task 6: 90 minutes

Prerequisite Knowledge:

Students should have a working knowledge of the following skills:

- Rounding and place value
- Adding time
- Adding, multiplying, and dividing to form fractions, decimals, and percents when given the algorithm and using a calculator
- Reading a circle graph and data tables
- Interpreting map elements
- Researching information
- Writing to inform

Objectives:

Students will:

- calculate ratios as fractions, divide to find decimals, and multiply by 100 to show percents when given the algorithm.
- construct and label a circle graph.
- read a map's scale to convert inches to miles.
- write to inform.

Materials/Resources/Printed Materials:

- Paper and pencil
- One Student Resource Booklet per child
- Calculator
- Standard Ruler
- Reference Materials: Encyclopedia, Atlas, Almanac, Internet
- Road maps of the coastal states from MD to FL

Development/Procedures:

The learning unit should be taught in order.

Task 1: Students need to utilize maps to discover the Southeastern states. The students utilize rulers and collect data.

Task 2: Students are exploring ratios, decimals, percentages, and circle graph. They are required to explain their thinking.

Task 3: Students are analyzing data and computing decimals.

Task 4: Students are converting decimals, rounding decimals, and investigating time.

Task 5: Students are solving food problems that require critical thinking.

Task 6: Writing to inform prompt (uses information generated from entire learning unit).

Performance Assessment:

A Trip to Orlando is divided into 6 tasks that provide daily scoring tools and answer sheets using the Teacher Resource Booklet (TRB). Assessment can be done through oral presentations, teacher observation, and written work.

Extension/Follow Up:

The students may research and plan a trip to their own grandma, grandpa, parents, or other relative.

The students may compute how much they spend at local fast food chains.

The students may utilize key pals in another state to compare interesting state facts.

Research projects:

Why do some cars get better mileage than others?

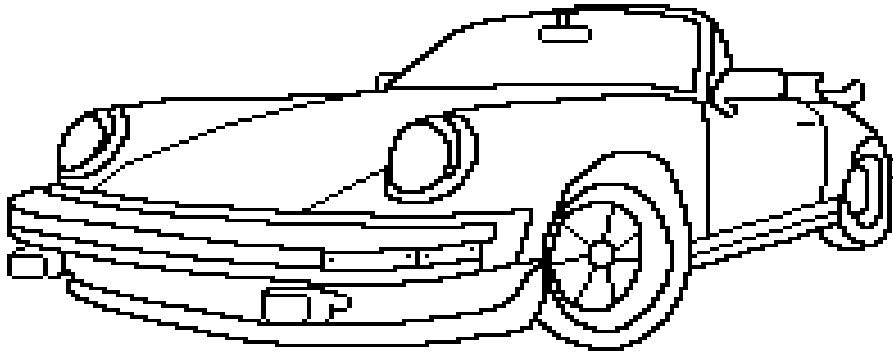
What causes gas prices to fluctuate?

What is the difference between a highway and the interstate?

Authors:

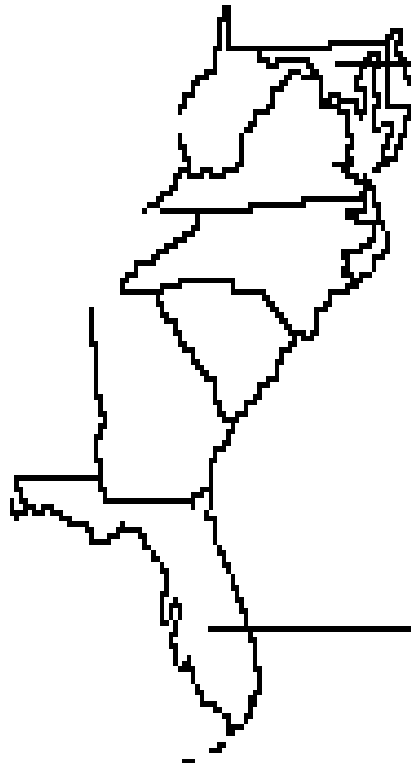
Barry H. Polinsky
Patuxent Elementary School
Prince George's County, MD

Theresa M. Bisker
Cromwell Valley Regional Magnet School
Baltimore County, MD



A TRIP TO ORLANDO!

TEACHER RESOURCE BOOKLET (TRB)



A TRIP TO ORLANDO!

Teacher Directions:

Discuss where class grandmothers may be living.

Use a US map and a map of Interstate 95 to locate some of the states mentioned by the students.

Ask if anyone has ever completed a family car trip.

- Where did you go? -What did you see that was fun and interesting?
- How long did it take you to drive there? -Did you help plan the trip?

Heather lives in Baltimore, Maryland and is planning to drive her brand new car to visit her grandmother who lives in Orlando, Florida. Heather is very excited to go to her grandma's house. She has already decided that she needs to drive through all of the Southeastern states to Orlando, Florida. Also, Heather is planning to drive on the major highway Interstate 95 the entire way. While Heather was planning her trip she noticed that Interstate 95 stretched from Northern Vermont to Southern Florida. During her trip Heather wants to investigate interesting facts about each state along her route. Heather needs your help in planning her fantastic trip!

Students need to have access to:
encyclopedias, reference books on states, current almanacs, atlas, and if available Internet state sites.

Heather wants you to research at least two states to find interesting facts that she would like to learn about.

INTERESTING FACTS

* You must research at least two states.

State Facts

State Name: Maryland Date of Statehood: April 28, 1788

State Capital: Annapolis State Population: 4,781,468

Nickname: State Flower: Black-eyed Susan
The Old Line State

Free State

Other Interesting Facts:

1. The Baltimore Orioles play baseball at Camden Yards.
2. Babe Ruth was born in Maryland.

The teacher will:

- * **Review SCALE** (gives the ratio of the measurement on the map to the measurement of the actual map)
- * **Convert inches and fractions** ($\frac{1}{6}$, $\frac{1}{4}$, $\frac{1}{2}$ of an inch) to miles
- * **Define scale as an element in helping to understand a map** (Map #1 scale is 1 inch = 80 miles)
- * **Introduce lessons on place value, decimals, and rounding**

Student supplies needed:

standard ruler (the map uses inches)
calculator

DIRECTIONS:

You need SRB4 (Data Table #1) and SRB5 (Map #1).

- _____ 1. First use Map #1 to list all of the states and their capitals in order from northern to southern states.
- _____ 2. Then use a standard ruler and Map #1, to determine how many miles Heather will travel in each state on Interstate 95.
- _____ 3. Next round the miles in each state to the nearest tens.
- _____ 4. Finally add the total number of rounded miles traveled on Interstate 95.

(DATA TABLE #1)

Refer to Data Table #1 for questions 1- 2B

- _____ 1. Explain how you rounded to the tens place value. Be sure to use the following math terms in your explanation: ones and place value.

The teacher will introduce RATIOS (a way to compare two numbers) with examples given below.

2. Heather made numerous observations about ratios that are in Data Table #1. For example she noticed that there is a ratio between states with the letter “V” and states without the letter “V.” Heather can write this ratio three different ways.
 Example: $\frac{1}{6}$ 1:6 1 of 6

- _____ 2A. Make at least two of the same ratios between states with the word “Carolina” and states without the name “Carolina.”
Example: $\frac{2}{6}$ 2:6 2 of 6

- _____ 2B. Heather loves ratios and wants you to create at least 2 more ratios from Data Table #1.

TRB 4
TASK 2

The teacher will introduce dividing fractions and converting to percents using a calculator.

PARTS OF MY TRIP

DIRECTIONS:

- _____ 1. Use the information collected in Data Table #1 to make a ratio between the number of miles Heather will drive in each state and the total rounded miles required to drive to Orlando, Florida.
- _____ 2. Divide the numerator (individual rounded state miles) by the denominator (total rounded miles) to the hundredths place.
- _____ 3. Compute the percentage of miles for each state.
The formula is decimal value $\times 100 = \%$.
- _____ 4. Add the total percent for each state.

(DATA TABLE 2)

Refer to Data Table #2 for questions 1- 2A.

- _____ 1. Why should your total percent be approximately 100%?

The teacher will review using and labeling circle graphs.

2. Create a circle graph that represents the six states total percent of miles driven in Data Table #2. Be sure to include: title, state names, and state percents.

(CIRCLE GRAPH)

- _____ 2A. Analyze the circle graph by writing at least two observations about how the states relate to one another.

TASK 3

TURBO CAR

The teacher will discuss how much a gas tank usually holds and the cost of gas at local gas stations.

- _____ 1. Heather can drive 30 miles with one gallon of gas in her turbo car. Her car has a ten gallon tank. How many miles can Heather drive with one tank of gas?
Show your work in the space provided.
- _____ 2. Use the total rounded number of miles from Data Table # 1 and the number of miles Heather can drive with one tank of gas to determine how many full tanks of gas Heather will need.

Hint: Divide the numerator (total rounded number of miles) by the denominator (how many miles Heather can drive on one full tank of gas).
Show your work in the space provided.

_____3. How many times will Heather need to stop to fill up her gas tank?

The teacher will review multiplying by money.

_____4. Heather needs your help in determining how much money she will need for gas. Gas costs \$1. 20 per gallon.

Compute how much it will cost for Heather to travel from Baltimore, Maryland to Orlando, Florida.

Refer to SRB 10 (Data Table #3)

_____5. Explain in what states Heather will need to fill-up for gas.

Hint : 1 gallon of gas = 30 miles
 10 gallons of gas = 1 full tank
 One full tank = 300 miles

TASK 4

SPEED RACER

Heather will be leaving on March 28, 2000 at 7:00 a.m. Heather does not plan to stop except for gas, bathroom breaks, and food. Heather is a very good driver and does not like to speed.

The teacher will review division with decimals to the hundredths place.

DIRECTIONS:

- _____1. Use Data Table #1 to fill in the rounded miles for each state in SRB 12 (Data Table #4).
- _____2. Divide the total number of miles in each state by the speed limit and round to the hundredths.
- _____3. Compute the total number of hours for your driving time.

(DATA TABLE #4)

The teacher will review fractions and time (24 hours equals 1 day).

- _____1. Use Data Table #4 to find what fraction of a day Heather would spend driving her turbo car on Interstate 95.
 Show your work in the space provided.
- _____2. Justify why South Carolina will take the longest travel time and Maryland will take the shortest amount of travel time by car.
- _____3. At what date and time will Heather arrive in Orlando, Florida?
 Show your work in the space provided.

DATE: _____

TIME: _____

JUNK FOOD HEAVEN

Heather stopped 3 times at her favorite fast food chain, Mac's Cafe, located along Interstate 95. She loves Mac's Cafe due to the Rock n' Roll music playing loudly while she eats her: veggie burger, milkshake, soft ice cream, soft shell taco, chicken nuggets and French fries. When she stops to eat she always uses the bathroom. It takes 60 minutes at each pit stop at Mac's Cafe, and Heather spends \$7.00 for each meal.

- _____ 1. Calculate the total amount of time Heather spends at Mac's Cafe on this trip.
Show your work in the space provided.
- _____ 2A. Compute the total amount of money Heather will need for all her meals at Mac's Cafe.
Show your work in the space provided.
- _____ 2B. Refer to Data Table #3 and your calculations for food from above. How much money will Heather need for food and gas to drive from Baltimore, MD to Orlando, FL?
Show your work in the space provided.
- _____ 2C. How much money will Heather need for a round trip?

PLAN OF ACTION FOR JOE

INTRODUCTION:

Today you will be writing to inform. When you write to inform, you use specific information to fully explain your topic. When you write to inform, you follow these steps:

- Think about all you have learned from the readings and your investigation.
- Think about what your audience needs to know about the topic.
- Put your information in a logical order.
- Use examples and descriptions to make the information clear to your audience.

Student supplies needed:

Lined paper

Student Resource Booklet

Graphic Organizers-web

Writing Prompt: Writing to Inform

Heather's little brother Joe will be old enough to drive in the year 2002. He is planning to celebrate this accomplishment by visiting his grandma in Orlando, FL! Joe is very interested in learning about the Southeastern region of the USA.

Imagine you are the older sibling for Joe and create a plan on how to drive to Grandma's house including:

- _____ fascinating points of interest for at least two states he will travel through
- _____ amount of time needed for travel
- _____ amount of money needed for food and gas
- _____ compare distance traveled to Orlando and how far you live from school
- _____ safety tip

Pre-Writing activity: You will have 15 minutes to complete the brainstorming.

Listing, webbing, pair share this information using graphic organizers.

Drafting:

Use your ideas to write a rough draft of your plan on the lined paper that was given to you. You will have 30 minutes to draft your plan.

Revising:

Yesterday you wrote your first draft for Joe's Plan of Action. Today you will be revising your draft. When you revise a draft, you add, take out, change, or move your ideas to improve your writing.

_____1 Reread the prompt below.

Heather's little brother Joe will be old enough to drive in the year 2002. He is planning to celebrate this accomplishment by visiting his grandma in Orlando, FL! Joe is very interested in learning about the Southeastern Region of the USA.

Imagine you are the older sibling for Joe and create a plan on how to drive to Grandma's house including:

- _____ fascinating points of interest for at least two states driven through
- _____ amount of time needed for travel
- _____ amount of money needed for food and gas
- _____ distance traveled to Orlando as compared to how far you live from school
- _____ safety tip

_____2 Reread your draft.

_____3. Use the self-evaluation guide below to help your draft and point to, underline, or highlight:

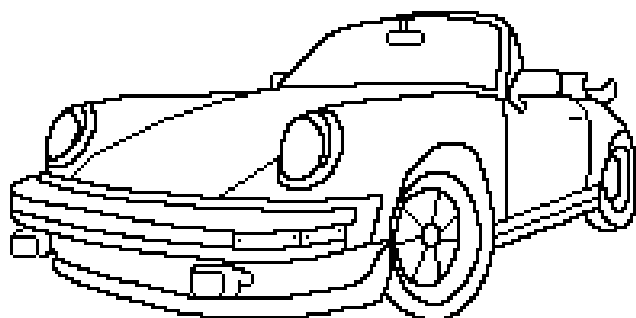
- _____ The fascinating points of interest
- _____ The amount of time in hours needed to drive for the entire round trip
- _____ The expenses you will need to pay for during the trip (gas and food)
- _____ The distance traveled to Orlando as compared to the distance you travel to school
- _____ Topic sentence, supporting details, and concluding sentence

If you could not find these details in your writing, you will make changes to your draft by adding, taking out, changing, and moving your ideas.

_____4. Write your final draft.

NAME _____

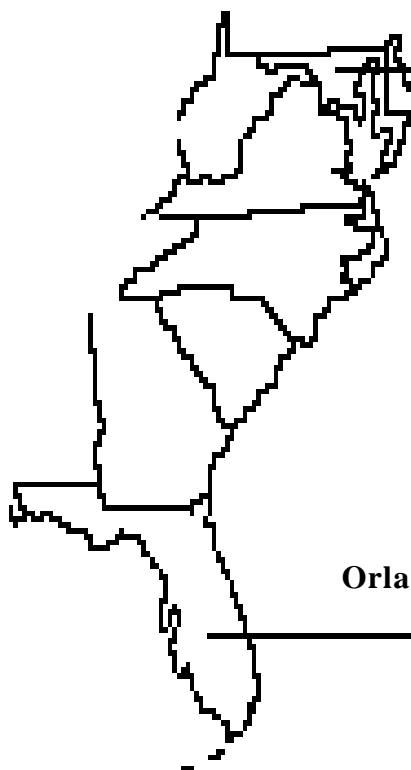
DATE _____



A TRIP TO ORLANDO!

STUDENT RESOURCE BOOKLET (SRB)

Baltimore, Maryland



Orlando, Florida



A TRIP TO ORLANDO!

Heather lives in Baltimore, Maryland and is planning to drive her brand new car to visit her grandmother, who lives in Orlando, Florida. Heather is very excited to go to her grandma's house. She has already decided that she needs to drive through all of the Southeastern states to Orlando, Florida. Also, Heather is planning to drive on the major highway Interstate 95 the entire way. While Heather was planning her trip she noticed that Interstate 95 stretched from Northern Vermont to Southern Florida. During her trip Heather wants to investigate interesting facts about each state along her route. Heather needs your help in planning her fantastic trip!

Heather wants you to research at least 2 states to find interesting facts Heather would like to learn about.

INTERESTING FACTS

* You must research at least **two** states.

State Name: _____

Date of Statehood: _____ **State Capital:** _____

Nickname: _____ **State Population:** _____

State Flower: _____

Other Interesting Facts: _____

SRB 3

State Name: _____

Date of Statehood: _____ **State Capital:** _____

Nickname: _____ **State Population:** _____

State Flower: _____

Other Interesting Facts: _____

DIRECTIONS:

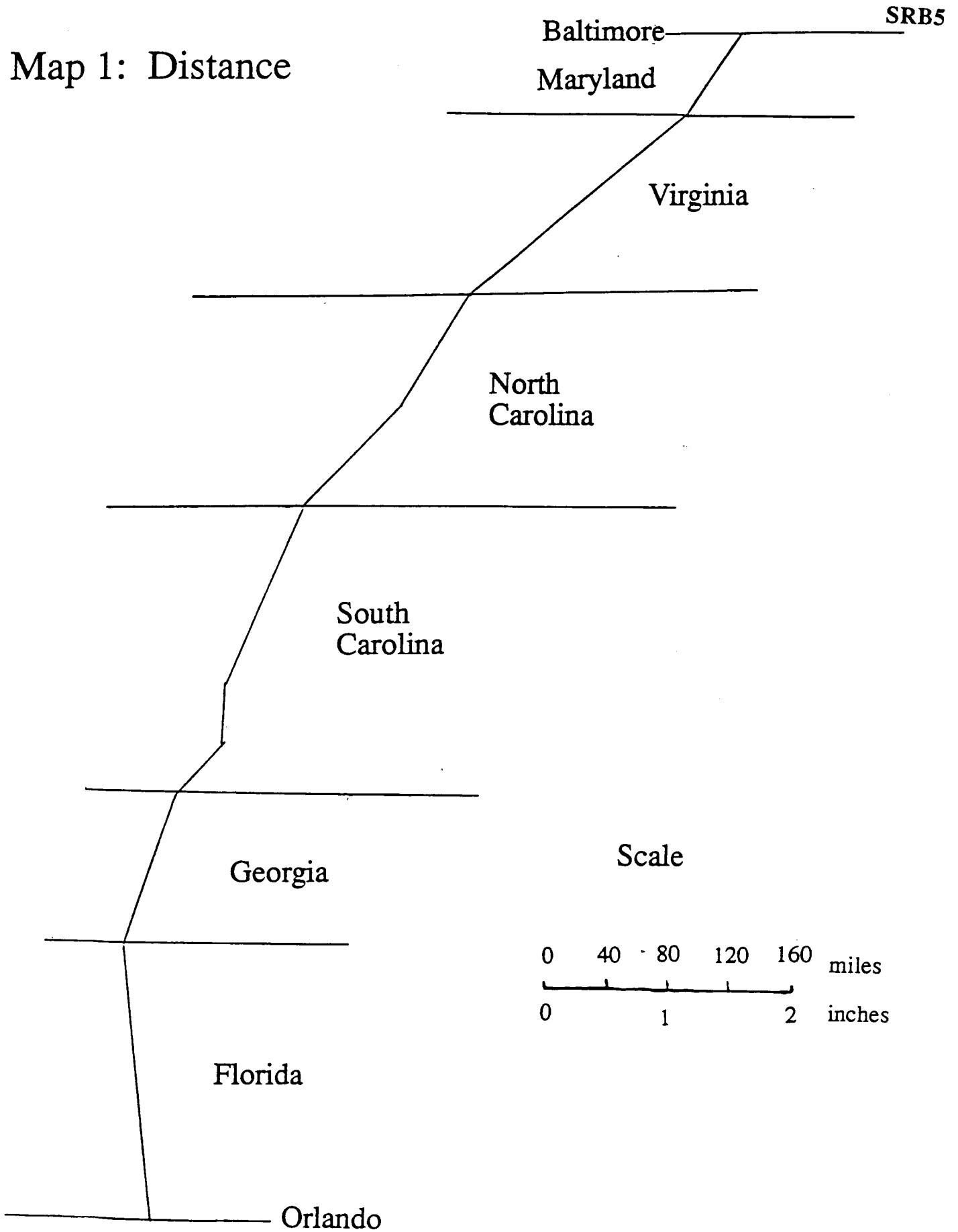
You need SRB 4(Data Table #1) and SRB 5(Map #1).

- _____ 1. First use Map #1 to list all of the states and their capitals in order from the northern to the southern states.
- _____ 2. Then use a ruler and SRB 5(Map #1), to determine how many miles Heather will travel in each state on Interstate 95.
- _____ 3. Next, round the miles in each state to the nearest tens place.
- _____ 4. Finally, add the total number of rounded miles on Interstate 95.

Data Table #1

State		Miles on I-95	
Capital	State Abbreviation	Actual Number of Miles	Rounded # to the tens place
1			
2			
3			
4			
5			
6			
		Total Rounded Miles:	

Map 1: Distance



Refer to SRB 4(Data Table #1) for questions 1- 2B

- _____ 1. Explain how you rounded to the nearest tens place value. Be sure to use the following math terms in your explanation: ones and place value.

2. Heather made numerous observations about ratios that are in SRB 4(Data Table #1). For example she noticed that there is a ratio between states with the letter “V” and states without the letter “V”.

Heather can write this ratio three different ways.

Example: $\frac{1}{6}$ 1:6 1 of 6

- _____ 2A. Make at least **two** of the same ratios between states with the word “Carolina” and states without the name “Carolina.”

- _____ 2B. Heather loves ratios and wants you to create at least 2 more ratios from SRB 4(Data Table #1).



PARTS OF MY TRIP

DIRECTIONS:

You will need SRB 8(Data Table #2).

- _____1. Use the information collected in Data Table #1 to make a ratio between the number of miles Heather will drive in each state and the total rounded miles required to drive to Orlando, Florida.
- _____2. Divide the numerator (individual rounded state miles) by the denominator (total rounded miles) and round to the hundredths place.
- _____3. Compute the percentage of miles for each state.
The formula is Decimal value X 100= Percent (%).
- _____4. Add the total percent for each state.

Refer to SRB 8 (Data Table #2) for questions 1- 2A.

- _____1. Why should your total percent be approximately 100%?

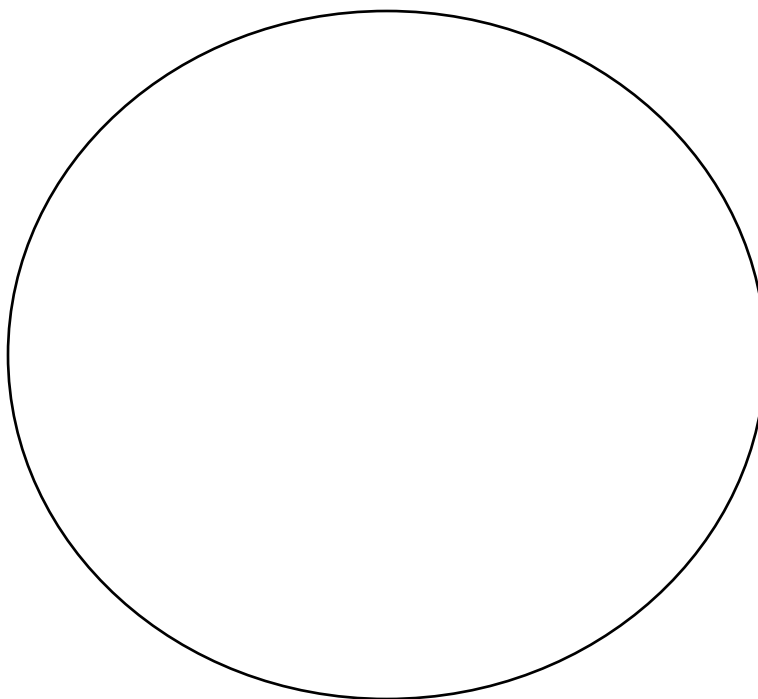


Data Table #2

Ratio Individual Rounded <u>State</u> Miles Total Rounded Miles	Decimal Rounded to the hundredths place	Percent Decimal x 100=%
1		
2		
3		
4		
5		
6		
	Total Percent:	

2. Create a circle graph that represents the six states total percent of miles driven in SRB 8(Data Table #2). Be sure to include: title, state names, and state percent in the correct area.

CIRCLE GRAPH



- _____2A. Analyze the circle graph by writing at least **two** observations about how the states relate to one another.

TURBO CAR

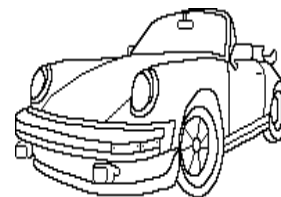
- _____ 1. Heather can drive 30 miles with one gallon of gas in her turbo car. Her car has a ten gallon tank. How many miles can Heather drive with one tank of gas?
Show your work in the space provided



- _____ 2. Use the total rounded number of miles from SRB 4(Data Table #1) and the number of miles Heather can drive with one tank of gas to determine how many full tanks of gas Heather will need.

Hint: Divide the numerator (total rounded number of miles) by the denominator (how many miles Heather can drive on one full tank of gas.) Show your work in the space provided.

- _____ 3. How many times will Heather need to stop to fill up her gas tank?

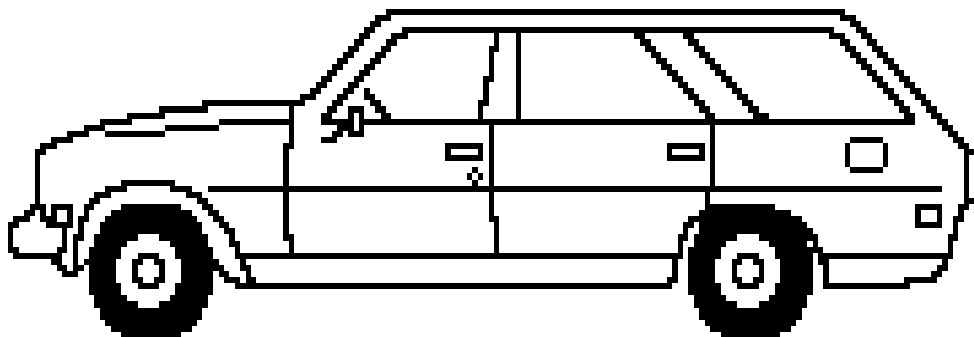


- _____4. Heather needs your help in determining how much money she will need for gas. Gas costs \$1. 20 per gallon.

Compute how much it will cost Heather to travel from Baltimore, Maryland to Orlando, Florida.
Refer to SRB 12 (Data Table #3)

- _____5. Explain in what states Heather would need to fill up for gas.

Hint: 1 gallon of gas = 30 miles
10 gallons of gas = one full tank
One full tank = 300 miles



Data Table #3

Number of miles driven in each state	Number of gallons of gas consumed in each state	Total cost for gas consumed in each state
1 Maryland		
2 Virginia		
3 North Carolina		
4 South Carolina		
5 Georgia		
6 Florida		
	Total Cost: \$	

SPEED RACER

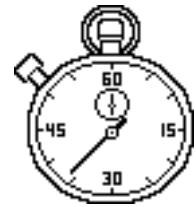
Heather will be leaving on March 28, 2000 at 7:00 a.m. Heather does not plan to stop except for gas, bathroom breaks, and food. Heather is a very good driver and she does not like to speed.

DIRECTIONS:

- _____ 1. Use Data Table #1 to fill in the rounded miles for each state in SRB 14 (Data Table #4).
- _____ 2. Divide the total number of miles in each state by the speed limit and round to the hundredths.
- _____ 3. Compute the total number of hours for your driving time.

QUESTIONS:

- _____ 1. Use Data Table #4 to find what fraction of a day Heather would spend driving her turbo car on Interstate 95.
Show your work in the space provided.



- _____ 2. Justify why South Carolina will take the longest travel time and Maryland will take the shortest amount of travel time by car.

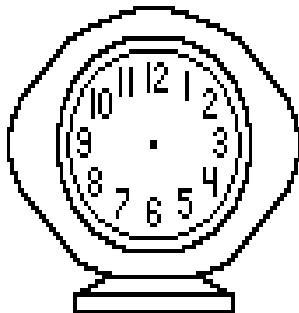
Data Table #4

Rounded Miles per each State	Speed Limits	# rounded miles <u>for each state</u> speed limit	# of Miles on Interstate 95
			Round the Number of Hours to the hundredths place
1 Maryland	60 miles per hour		
2 Virginia	60 miles per hour		
3 North Carolina	65 miles per hour		
4 South Carolina	55 miles per hour		
5 Georgia	70 miles per hour		
6 Florida	60 miles per hour		
		Total Number of Hours Rounded to the ones place:	

- _____ 3. At what date and time will Heather arrive in Orlando, Florida if she did not need to stop for gas and food?
Show your work in the space provided.

DATE: _____

TIME: _____



TASK 5

JUNK FOOD HEAVEN

Heather stopped 3 times at her favorite fast food chain, Mac's Cafe, that are located along Interstate 95. She loves Mac's Cafe due to the Rock n' Roll music playing loudly while she eats her: veggie burger, milkshake, soft ice cream, soft shell taco, chicken nuggets, and French fries. When she stops to eat she always uses the bathroom. It takes 60 minutes at each pit stop at Mac's Cafe and Heather spends \$7.00 for each meal.

- _____ 1. Calculate the total amount of time Heather spends at Mac's Cafe on this trip. Show your work in the space provided.



_____2A. Compute the total amount of money Heather will need for all her meals at Mac's Cafe. Show your work in the space provided.



_____2B. Refer to Data Table #3 and your calculations for food. How much money will Heather need for food and gas to drive from Baltimore, MD to Orlando, FL? Show your work in the space provided.



_____2C. How much money will Heather need for a round trip?

TASK 6

PLAN OF ACTION FOR JOE

INTRODUCTION:

Today you will be writing to inform. When you write to inform, you use specific information to fully explain your topic. When you write to inform, you follow these steps:

- * Think about all you have learned from the readings and your investigation.
- * Think about what your audience needs to know about the topic.
- * Put your information in a logical order.
- * Use examples and descriptions to make the information clear to your audience.

Writing Prompt: Writing to Inform

Heather's little brother Joe will be old enough to drive in the year 2002. He is planning to celebrate this accomplishment by visiting his grandma in Orlando, FL! Joe is very interested in learning about the Southeastern Region of the USA.

Imagine you are the older sibling for Joe and create a plan on how to drive to Grandma's house including:

- _____ fascinating points of interest for at least two states
- _____ amount of time needed for travel
- _____ amount of money needed for food and gas
- _____ compare distance traveled to Orlando and how far you live from school
- _____ safety tip

Pre-Writing activity: You will have 15 minutes to complete the brainstorming.

Drafting:

Use your ideas to write a rough draft of your plan on the lined paper that was given to you. You will have 30 minutes to draft your plan.

Revising:

Yesterday you wrote your first draft for Joe's Plan of Action. Today you will be revising your draft. When you revise a draft, you add, take out, change, or move your ideas to improve your writing.

_____1 Reread the prompt below.

Heather's little brother Joe will be old enough to drive in the year 2002. He is planning to celebrate this accomplishment by visiting his grandma in Orlando, FL! Joe is very interested in learning about the Southeastern Region of the USA.

Imagine you are the older sibling for Joe and create a plan on how to drive to Grandma's house including:

- _____ fascinating points of interest for at least two states
- _____ amount of time needed for travel
- _____ amount of money needed for food and gas
- _____ compare the distance traveled to Orlando and how far you live from school
- _____ safety tip

_____2 Reread your draft.

_____3. Use the self-evaluation guide below to help your draft and point to, underline, or highlight:

- _____ the fascinating points of interest
- _____ the amount of time in hours needed to drive for the entire round trip
- _____ the expenses you will need to pay for during the trip (gas and food)
- _____ the distance traveled to Orlando compared to school
- _____ topic sentence, supporting details, and concluding sentence

If you could not find these details in your writing, you will make changes to your draft by adding, taking out, changing, and moving your ideas.

_____4. Write your final draft.

SCORING TOOLS

TASK 1

A Trip to Orlando!:

Interesting facts: 10 -8 Level 4 Outstanding
 7 -5 Level 3 Satisfactory
 4- 2 Level 1 Needs Improvement
 1-0 Level 0 Needs a lot of improvement

Data Table #1

<u>STATE</u>	<u>CAPITAL</u>	<u>AB</u>	<u>MILES</u>	<u>DISTANCE ON THE MAP</u>
1. Maryland	Annapolis	MD	70 70	3/4"
2. Virginia	Richmond	VI	190 190	2 1/4"
3. North Carolina	Raleigh	NC	183 180	2 1/6"
4. South Carolina	Columbia	SC	201 200	2 1/2"
5. Georgia	Atlanta	GA	112 110	1 1/4"
6. Florida	Tallahassee	FL	189 <u>190</u>	<u>2 1/4"</u>

TOTAL ROUNDED MILES: 940 = 11 1/6 INCHES

QUESTION 2A: 2/6 2:6 2 of 6

TASK 2

Parts Of My Trip:

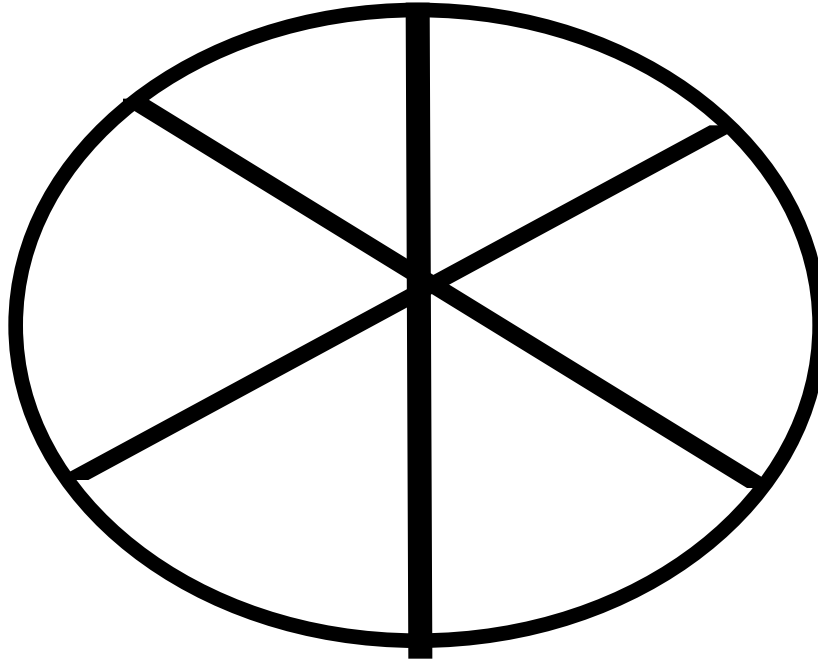
Data Table #2

<u>STATE</u>	<u>RATIO</u>	<u>DECIMAL</u>	<u>PERCENT</u>
MD	70/940	.07	7.0%
VI	190/940	.20	20.0%
NC	180/940	.19	19.0%
SC	200/940	.21	21.0%
GA	110/940	.12	12.0%
FL	190/940	.20	<u>20.0%</u>

TOTAL PERCENT: 99% (should be close to 100%)

QUESTION 1: Your total percent will be close to 100% because the entire distance of 940 miles = 100% so your six percents should come close to 100% when added.

QUESTION 2: CIRCLE GRAPH



TASK 3

Turbo Car:

QUESTION 1: $30 \times 10 = 300$ Gallons

QUESTION 2: $940/300 = 3.1$ tanks of gas

QUESTION 3: 4 Times

QUESTION 4: \$37.60

QUESTION 5: 4 states going south: MD, NC, SC, and FL
(fill gas tank every 300 miles)

Top Level

Contains a complete response with clear, coherent, unambiguous, and elegant explanation.

Includes clear and simple diagram.

Communicates effectively to an identified audience.

Shows understanding of the question's mathematical ideas and processes.

Identifies all the important elements of the question.

Includes examples and counter examples.

Gives strong supporting arguments.

Goes beyond the requirements of the problem.

Second Level

Contains a good solid response with some of the characteristics above, but probably not all.

Explains less elegantly, less completely.

Does not go beyond requirements of the problem.

Third Level

Contains a complete response, but the explanation may be muddled.

Presents arguments but incomplete.

Includes diagrams but inappropriate or unclear.

Indicates understanding of mathematical ideas, but not expressed clearly.

Fourth Level

Omits significant parts or all of the question and response.

Has major errors.

Use inappropriate strategies.

TASK 4

Speed Racer:

DATA TABLE #4

<u>State Rounded Miles</u>		<u>Speed Limit</u>	<u>Miles/Speed limit</u>	
<u>Rounded</u>				
<u>Number of</u>				
<u>Hours to the</u>				
<u>Hundredths</u>				
<u>place</u>				
1. Maryland	70	60 miles	70/60	1.16
2. Virginia	190	60 miles	190/60	3.17
3. N.C.	180	65 miles	180/65	2.77
4. S.C.	200	55 miles	200/55	3.60
5. Georgia	110	70 miles	110/70	1.57
6. Florida	190	60 miles	190/60	3.17

Total Number of Hours 15 hours 44/100 (44/100 is less than 30 minutes)
=15hrs. 26min.

QUESTION 1: 15/24 of the day driving only

QUESTION 2: South Carolina's speed limit is slower than Maryland's speed limit. Also South Carolina is a longer distance on Interstate 95 than Maryland.

QUESTION 3: DATE March 28, 2000
TIME 10:00 P.M. - 11:00 P.M.

TASK 5

Junk Food Heaven:

QUESTION 1 : $3 \times 60 \text{ MINUTES} = 180 \text{ MINUTES} = 3 \text{ HOURS}$

QUESTION 2A: $3 \times \$7.00 = \21.00

QUESTION 2B: $\$21.00 + \$37.60 = \$58.60$

QUESTION 2C: $\$58.60 \times 2 = \117.20

TASK 6

Plan of Action for Joe:

Scoring Rule: WRITING TO INFORM

2= Consistently addresses audience's needs by using purposeful and accurate information to fully explain the topic. Text is uniformly organized, and language choices often enhance the text.

1= Sometimes addresses audience's needs by using purposeful and mostly accurate information to adequately explain the topic. Text is generally organized, and language choices sometimes enhance the text.

0= Rarely or never addresses audience's needs by using purposeful or accurate information to explain the topic. Text lacks organization, and language choices seldom, if ever, enhance the text.

Top Level

Contains a complete response with clear, coherent, unambiguous, and elegant explanation.

Includes clear and simple diagram.

Communicates effectively to an identified audience.

Shows understanding of the question's mathematical ideas and processes.

Identifies all the important elements of the question.

Includes examples and counter examples.

Gives strong supporting arguments.

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Contains a good solid response with some of the characteristics above, but probably not all.

Explains less elegantly, less completely.

Does not go beyond requirements of the problem.

Third Level

Contains a complete response, but the explanation may be muddled.

Presents arguments but incomplete.

Includes diagrams but inappropriate or unclear.

Indicates understanding of mathematical ideas, but not expressed clearly.